



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,252	09/21/2005	Riki Okamoto	52433/818	1945
26646 7590 02/13/2009 KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004				
EXAMINER YEE, DEBORAH				
ART UNIT 1793		PAPER NUMBER		
MAIL DATE 02/13/2009		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/550,252

Applicant(s)

RIKI OKAMOTO ET AL.

Examiner

Deborah Yee

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 5 and 6 is/are pending in the application.
4a) Of the above claim(s) 6 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3 and 5 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 29, 2008 has been entered.

Election/Restrictions

2. Claim 6 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 7, 2007.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 to 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 2001-342543 (hereinafter JP-543) or US Patent 6,364,968 to Yashuara et al (hereinafter US-968) alone or in view of US Patent 5,470,529 to Nomura et al. (hereinafter US-529) for the reasons set forth in the previous office actions dated December 4, 2007 and June 30, 2008.

Response to Arguments

5. Applicant's arguments filed December 29, 2008 have been fully considered but they are not persuasive.
6. Applicant submitted that JP-543 requires 0.0005 to 0.01%Mg to improve hole expandability as described in paragraph [0023] and its examples which contain less than 0.0005% Mg exhibit tensile strength (TS) ranging from 695 to 649 MPa. In contrast, inventive steel sheet is limited to less than 0.0005% Mg and exhibits TS higher than 980 MPa which is achieved by meeting equations <1> to <3> and <1>' to <3>'.
$$\lambda = \frac{TS - 695}{1043 - 695} \times 100 \geq 55\%$$
$$\lambda = \frac{TS - 649}{1038 - 649} \times 100 \geq 65\%$$
7. It is the Examiner's position that JP-543 discloses specific hot rolled steel sheet example V in table on page 10 that meets the claimed composition except for 0.003% Mg; and when calculated, satisfies claimed equations <1> and <2>; and when calculated, closely satisfies claimed equation <3> , with a value of 464.75 which closely approximates >465 . In addition, steel V is processed according to steel V1 and V2 in the table on page 11 to exhibit tensile strength (TS) of 1043N/mm² and 1038 N/mm² and hole expandability (λ) at 55% and 65%, respectively and are within the inventive TS range of at least 980 N/ mm² and $\lambda = 48$ to 73%.
$$\lambda = \frac{TS - 980}{1043 - 980} \times 100 \geq 55\%$$
$$\lambda = \frac{TS - 980}{1038 - 980} \times 100 \geq 65\%$$
8. Although prior art example V contains 0.003% Mg, it would be obvious to lower content since a broad Mg range having a lower limit of 0.0005% is taught. Note that prior art lower limit of 0.0005% Mg closely approximates inventive claimed Mg upper limit of <0.0005%. Since Applicant has not demonstrated (e.g. by comparative test data) that the claimed Mg range is somehow critical and productive of new and unexpected results, then present invention would not patentably distinguish over prior art.

9. It should be further noted that third paragraph on page 7 of Applicant's specification and paragraph [0023] of JP-543, both teach adding at least 0.0005% Mg to steel alloy for the same reason which is to combine with oxygen to form very fine and evenly distributed Mg oxides and composite Mg oxides with Al_2O_3 , SiO_2 , MnO and Ti_2O_3 resulting in the suppression stress concentration and coarse cracking thus improving hole expandability. For Applicant to amend claim to restrict Mg to less than 0.0005% would depict the omission or reduction of an element (Mg) with the consequent loss of its known function, and therefore would not be of any patentable significance, see *In re Wilson et al.*, 153USPQ740.

10. Regarding US-968, Applicant argued that prior art steel sheet contains $\text{Si} \leq 1.0\%$ whereas present invention steel contains 1.2 to 1.5%Si. In addition, US-968 clearly teaches away from more than 1.0% Si since all its examples are less than 1.0% and it further stated going beyond 1.0% Si increases hot deformation resistance, see column 6, lines 12-17.

11. It is the Examiner's position that US-968 in column 6, lines 12-17 teaches adding "about 1.0% Si". Note the term "about" permits the tolerance beyond the 1.0% limit. Hence prior art "about 1.0%" Si would closely approximate claimed lower limit of 1.2% Si. In addition, since Applicant has not demonstrated (e.g. by comparative test data) the criticality of the claimed Si range, then a composition with 1.2% Si verses a composition with slightly less Si (say 1.0%) would depict a mere difference in the proportion of element without any attendant unexpected results which would not patentably distinguish claims over prior art. Note first paragraph on page 5 of

Applicant's specification teaches 0.05 to 1.5% Si as permissible and 0.9 to 1.3% Si as preferable.

12. For the above reasons, claims would not patentably distinguish over prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/
Primary Examiner
Art Unit 1793

/DY/